

Please the description of Figure 3 found at page 10 lines 9-10 with the following:

A1
Figures 3 and 3A show a cross section view of a 7-conductor cable configuration according to the present invention.

Please replace the paragraph beginning at page 15 line 17 with the following"

A2
In this configuration, center conductor **302** is shown as a single conductor. However, the intent is not to exclude the use of a twisted pair for the center conductor shown as conductors **302a** and **302b** in **Figure 3A**. Also, the preferable mode for the twisted pair wires is the single conductor mode where the ends are electrically connected, but the differential mode may be preferable in a particular application. As known in the art, any conductor may carry both data and power simultaneously.

In accordance with 37 CFR § 1.121(c) a clean set of claims is presented immediately below. A version including amendment marks follows the remarks.

- A3
cont
1. (Amended)A well logging system comprising:
 - (a) a downhole well data sensor;
 - (b) a downhole data transmitter;
 - (c) a surface data receiver; and
 - (d) a data transmission cable linking the transmitter and the receiver, the cable

A3
Cable

having at least one twisted pair of signal conductors, each of the conductors being separately insulated, an insulation sheath surrounding the twisted pair of conductors and a tensile load carrier surrounding the insulation sheath, the load carrier comprising a sheath of tensile load carrying filaments.

2. A well logging system as described by claim 1 wherein the transmitter and receiver each includes a signal modem complimentary to each other.
3. A well logging system as described by claim 2 wherein the modems utilize data encoding and decoding methods selected from the group consisting of (i) QAM, (ii) CAP, and (iii) DMT.
4. A well logging system as described by claim 1 wherein the filaments are distributed about a perimeter of the load carrying sheath in radial layers.
5. A well logging system as described by claim 2 wherein wire size respective to filaments in outer radial layers of the sheath are greater than those of interior layers.
6. A well logging system as described by claim 1 wherein the cable has seven twisted pairs of insulated conductors within the insulation sheath.
7. A well logging data cable comprising :
 - (a) a twisted pair of signal conductors, each of the conductors being separately

insulated;

- (b) an insulation sheath surrounding the twisted pair of conductors; and
- (c) a tensile load sheath surrounding the insulation sheath, the tensile load sheath comprising a plurality of filaments.

- 8. A data cable as described by claim 7 comprising at least 6 twisted pairs of conductors disposed around a center conductor, all conductors being within the insulation sheath.
- 9. A data cable as described by claim 7 wherein the filaments are distributed about a perimeter of the tensile load sheath in radial layers.
- 10. A system as described by claim 1 wherein the sensor is selected from the group consisting of (i) a pressure sensor, (ii) a temperature sensor and (iii) a flow sensor.
- 11. A data cable as described by claim 7 having an effective capacitance between the twisted pair of conductors of less than 30 pF per foot of cable length.

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- 12. (Amended)A method of transmitting a signal from within a well borehole to a surface location comprising:

- (a) transmitting the signal with a downhole data transmitter;
- (b) conveying the signal on a data transmission cable linking the transmitter and to a surface receiver, the cable having at least one twisted pair of signal

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